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10/596,312	06/08/2006	Takayuki Tsukizawa	36856.1439	5223

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EXAMINER
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3729

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/596,312  
Filing Date: June 08, 2006  
Appellant(s): TSUKIZAWA ET AL.

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Tsukizawa et al  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 5/26/10 appealing from the Office Action.

**(1) Real Party in Interest**

The examiner has no comment on the statement of the real party in interest: Murata Manufacturing Co., Ltd., 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto-fu, Kyoto 617-8555, Japan.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments**

The examiner has no comment on the Appellants' statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the Appellants' statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by an advisory action) is being maintained by the examiner except for the grounds of rejection listed under the subheading "WITHDRAWN REJECTIONS."

**(7) Claims Appendix**

The examiner has no comment on the copy of the claims contained in the Appendix to the Appellants' brief.

**(8) Evidence Relied Upon**

6,228,196

Sakamoto et al

05-2001

**(9) Grounds of Rejection**

The following grounds of rejection are applicable to the appealed claims and are expressly stated in the Final Rejection (filed on November 20, 2009) and the non-Final Rejection (filed on May 07, 2009). No new grounds of rejection are being presented and the following grounds of rejection are hereby repeated below for the convenience of the Appellants and the BPAI:

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al (US 6,228,196).

**Regarding claim 16**, Sakamoto et al teach a method of producing a multilayer ceramic substrate, comprising the steps of:

- mounting a chip electronic component (Fig. 1, items 10-12) including a ceramic sintered compact (Fig. 1, 1) defining an element assembly and terminal electrodes (Fig. 3, 19a) on

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a ceramic green body (1g) having conductors (39, 46, 14, 17) thereon such that the terminal electrodes are brought into contact with the corresponding conductors; and

- firing the ceramic green body (Col. 15, lines 14-20) having the chip electronic component so as to integrate the conductors on the ceramic green body with the corresponding terminal electrodes of the chip electronic component by sintering.

**Regarding claim 17**, Sakamoto et al teach that the ceramic green body (Fig. 3, 1g) is defined by a ceramic green sheet, and a green ceramic stack formed by stacking the ceramic green sheet having the chip electronic component and other ceramic green sheets is fired.

**Regarding claim 18**, Sakamoto et al further teach the step of:

- forming a constraining layer (Fig. 3, 48) on at least one of an uppermost layer (2g) and an internal layer (4g) of the green ceramic stack (1g); wherein
- the constraining layer primarily includes a sintering-resistant powder (Col. 15, lines 11-20) that is not substantially sintered at the sintering temperature of the ceramic green sheets.

**Regarding claim 19**, Sakamoto et al teach that the constraining layer (Fig. 3, 48) is a sheet including the sintering-resistant powder and an organic binder (Col. 15, lines 20-25).

**Regarding claim 20**, Sakamoto et al teach that the sheet of the constraining layer (Fig. 3, 48) is formed on the uppermost layer of the green ceramic stack, and the method further comprises the step of pressure-bonding (Col. 15, lines 48-53) the constraining layer to press the chip electronic component into the ceramic green sheet.

**Regarding claim 21**, Sakamoto et al teach that the green ceramic stack having the constraining layer (Fig. 3, 48) is fired (Col. 15, lines 14-20) with a pressure of about 1 MPa

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being applied thereto (Col. 15, lines 56-64).

**Regarding claim 22**, Sakamoto et al teach that the constraining layer (Fig. 3, 48) is formed of a green compact of the sintering-resistant powder (Col. 15, lines 20-25) on the uppermost surface of the green ceramic stack.

### **(10) Response to Arguments**

With respect to the appellants' argument about the rejection of claims 16-22 (Section ARGUMENT; Pages 8-11), the issue being brought up by the appellants is only about the independent claim 16 where the appellants assert that the prior art Sakamoto et al (US 6,228,196) does not teach nor disclose the firing (sintering) of the entire ceramic green **unsintered body** with an already **embedded sintered** component inside the body (Remarks, page 10, 1<sup>st</sup> paragraph).

In response to these remarks, the examiner had indicated in the Advisory Action (filed on 3/08/10) that Sakamoto et al (US 6,228,196) at a minimum do teach the firing (sintering) of the entire ceramic green **unsintered body** with an already embedded, **preliminary baked or sintered component** inside the body (Sakamoto et al, Col. 10, lines 46-49) and the appellants acknowledge that teaching (Remarks, page 10, last 2 paragraphs). Now, the appellants shift the arguments by claiming that teaching is being taught away (Remarks, page 11, 2<sup>nd</sup> paragraph) by Sakamoto et al. Therefore, that teaching or knowledge can not be applied in the rejection.

In response to these arguments about "teaching away", first Sakamoto et al do teach several embodiments of making multilayer circuit board, including one where there is the firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary

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baked or sintered component inside the body (Sakamoto et al, Col. 10, lines 46-49) and Sakamoto et al is **completely absent** about providing a statement claiming to teach away from that embodiment. Second, by teaching a preferred way from several embodiments can not be assumed as teaching away all other less preferred embodiments in the specification.

Furthermore, according to MPEP, the rejection under 35 U.S.C. 102 requires that:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

And any teachings from the “Background of the Invention” to the Drawings, the Abstract, the Detailed Description and the Claims are part of the “printed publication” where one of a skill in the art can draw the knowledge from. Thus, one of a skill in the art can apply the information or teaching of Sakamoto et al’s printed publication to reject or overcome the appellants’ claimed invention, including the teaching of the firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body (Remarks, page 10, 1<sup>st</sup> paragraph).

Therefore, Sakamoto et al do not teach away but do rather teach the firing (sintering) of the entire ceramic green unsintered body with an already embedded, preliminary baked or sintered component inside the body, as claimed.

Regarding Dependent Claims 17-22:

Appellants do not cite any arguments with respect to the limitations of claims 17-22, therefore the responses by the examiner herein for substantially the same reasons as provided

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above are incorporated herein and made a part hereof, and the rejection of Claims 17-22 are maintained.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

*Notation:* the IDS (filed on 7/26/10) is signed and attached with the prior art (US 6,228,196) crossed out as it has already been applied/submitted by the examiner in the Rejection (filed on 5/07/09).

Respectfully submitted,

/Phan Thiem/

Primary, Art Unit 3729

August 11, 2010

Conferees:

/Derris H Banks/

Supervisory Patent Examiner, Art Unit 3729

/Michael Phillips/

RQAS